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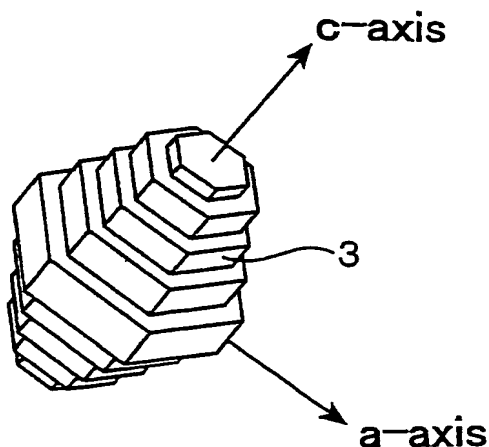
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- (71) Applicant (for all designated States except US): NIPPON SHOKUBAI CO., LTD. [JP/JP]; 1-1, Koraibashi 4-chome, Chuo-ku, Osaka-shi, Osaka 541-0043 (JP).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): OBATA, Hitoshi [JP/JP]; 3-5, Mukonosu 6-chome, Amagasaki-shi, Hyogo 661-0035 (JP). KAWAHARA, Hidehisa [JP/JP]; 11-34, Nagaomotomachi 7-chome, Hirakata-shi, Osaka 573-0163 (JP). TOMITA, Takashi [JP/JP]; 2-23, Uenohigashi 1-chome, Toyonaka-shi, Osaka 560-0013 (JP).
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(54) Title: CONTROL OF ICE-CRYSTAL GROWTH BY NON-PROTEINACEOUS SUBSTANCE



(57) Abstract: The present invention makes it possible to attain various applications using antifreeze activity without an antifreeze protein. The agent for the inhibition of ice-crystal growth includes a non-proteinaceous substance, wherein an aqueous solution of the non-proteinaceous substance in a concentration of 10 mg/ml causes the deposition of non-flat disk-shaped ice crystals. The agent for the lowering of an ice-crystal growth initiation temperature includes a non-proteinaceous substance, wherein an aqueous solution of the non-proteinaceous substance in a concentration of 10 mg/ml shows thermal hysteresis by a temperature of 0.020 C or higher. The agent for the control of water freezing includes a non-proteinaceous substance, wherein an aqueous solution of the non-proteinaceous substance in a concentration of 10 mg/ml shows thermal hysteresis by a temperature of 0.020 C or higher and causes the deposition of non-flat disk-shaped ice crystals. The above non-proteinaceous substances are usually polymers each having a carbon chain as the main chain.

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